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Amendments to the Specification:

Please replace the paragraph on page 4, line 22, to page 5, line 3, with the following amended paragraph:

A1
A reflecting structure according to the present invention includes a first layer 1 or backplane. The first layer 1 has a front side 3 and a back side 5. The first layer 1 typically has a shape and surface area similar to the desired overall shape and surface area of the reflecting structure. Reflecting structures such as the present invention may be made in any dimensions. Typically, such structures have a diameter of about 2 meters to about 40 meters.

Please replace the paragraph on page 5, lines 11-14, with the following amended paragraph:

A2
Typically, the first layer is made of an electrically insulating material. One example of a material that may be utilized to form the first layer is [kapton] Kapton. Other materials that may be employed include polyvinylidene difluoride, vinyl, nylon, graphite/epoxy composites, and/or carbon nanotube composites.

Please replace the paragraph on page 5, lines 16-19, with the following amended paragraph:

A3
The present invention also includes stiffening elements 9. The stiffening elements 9 help to strengthen the structure as well as maintain what could be considered a default position of the reflecting structure. The default position may or may not be functional position of the structure. The stiffening elements typically tend to assume a particular desired position.

Please replace the paragraph on page 6, lines 11-18, with the following amended paragraph:

A4
The size, shape, arrangement and interconnection with the reflecting structure may vary. One embodiment of a reflecting structure includes a plurality of parallel carbon fiber stiffening rods 7 extending entirely across the reflecting structure. Other configurations could include a ring (not shown), in which the surface is stretched, an umbrella-like structure. Fig. 1b illustrates such an embodiment[,], although [Although,] Fig. 1b only illustrates three examples. Typically, a reflecting structure would include a number of rods 7 sufficient to cover the entire structure. Such rods typically would have a diameter of about 1 mm to about 10 mm. The thickness typically would provide a desired degree of stiffness and ability to deploy the structure.

Please replace the paragraph on page 6, line 20, to page 7, line 1, with the following amended paragraph:

A5
In one embodiment that includes carbon fiber stiffening rods, the rods 7 are incorporated into the first layer 1. Fig. 3 illustrates a cross-sectional view of such an embodiment. This

*Ans
end*

embodiment includes a first layer 1 formed of Kapton. In this case, the carbon fibers would be laid up on one surface of Kapton then sandwiched by placing another layer on top of the first and bonding the two by heating above the glass transition temperature.

Please replace the paragraph on page 7, lines 3-8, with the following amended paragraph:

A1

The present invention also includes a second layer 19 or front plane. The second layer 19 includes a front side 23 and a back side 21. The back side 21 of the second layer 19 faces the front side 3 of the first layer 1. The second layer 19 typically has a shape and surface area similar to the desired overall shape and surface area of the reflecting structure. Typically, the first layer 1 and the second layer 19 have substantially similar sizes [first layer and second layer], although the thicknesses of the two layers may differ.

Please replace the paragraph on page 7, lines 10-12, with the following amended paragraph:

A1

The thickness of the film depends at least in part upon the material being utilized to form the second layer 19 as well as the desired strength of the second layer 19. Typically, the second layer 19 has a thickness of about 1 μm to about 5 μm .

Please replace the paragraph on page 7, lines 14-18, with the following amended paragraph:

A2

The stiffening elements may also be arranged in the second layer 19. They could be arranged in any desired configuration. If employed with stiffening elements in the first layer 1 as well, the stiffening elements in the second layer 19 could be arranged running 90 degrees to the stiffening elements in the first layer 1 or in a fan shape to help maintain initial curvature, among other configurations.

Please replace the paragraph on page 7, lines 20-22, with the following amended paragraph:

A1

Typically, the second layer 19 is made of an electrically insulating material. One example of a material that may be utilized to form the second layer 19 is [kapton] Kapton. Other materials that may be employed include PVDF, vinyl and/or nylon.

Please replace the paragraph on page 8, lines 1-6, with the following amended paragraph:

A10

A reflecting surface 20 is present on the front side 23 of the second layer 19. The reflecting surface 20 reflects wavelengths of electromagnetic radiation that it is desired to reflect with the reflecting structure. Examples of materials that may be employed as the reflecting structure include Al, Au, Cr, and/or reflecting dielectric materials. Generally, the reflecting material has a thickness of a few tens of angstroms. The thickness can depend upon, among other factors, the wavelength of electromagnetic radiation of interest.

Please replace the paragraph on page 8, lines 8-15, with the following amended paragraph:

A11
Typically, the reflecting surface 20 has a thickness sufficient to provide a desired degree of reflectivity and durability. Other factors that may be taken into account in determining the thickness of the reflecting surface can include the electrical properties of the reflective coating materials, particularly for reflecting dielectric materials. Another factor is the wavelength of electromagnetic radiation. Additionally, compatibility with the substrate [that] on which the material is being deposited can be taken into account. One factor in compatibility is adhesion. Furthermore, the conditions of the deposition may be taken into account when determining the thickness of the material.

Please replace the paragraph on page 8, line 20, to page 9, line 2, with the following amended paragraph:

A12
In addition to the stiffening elements described above, the present invention may also include a plurality of shape retaining elements 41. The shape retaining elements 41 can include one or more materials that have a shape-retaining property. Counterbalancing forces between the shape retaining elements 41 and the stiffening elements 7 coarsely shape the reflecting structure. Smaller, fine adjustments of the structure can be carried out utilizing electroactive elements 39 as described herein.

Please replace the paragraph on page 9, lines 8-13, with the following amended paragraph:

A13
The shape retaining elements 41 may be arranged in and interconnected with the first layer 1 and/or the second layer 19 of the reflecting structure. As with the stiffening elements 7, the shape retaining elements 41 may be incorporated into one or both of the first layer 1 and the second layer 19. Typically, the shape retaining elements 41 are attached to the surface of the first layer 1 and/or the second layer 19. Fig. 3 illustrates an embodiment in which the shape retaining elements 41 are attached to the front side 3 of the first layer 1.

Please replace the paragraph on page 9, line 23, to page 10, line 3, with the following amended paragraph:

A14
Fig. 1a illustrates an embodiment that includes [six] eight shape-retaining elements 9 attached to the front side 3 of the first layer 1 of the reflecting structure. The [six] eight elements extend from one side of the first layer 1 to the center of the layer. These shape-retaining elements 9 have a thickness of [about] less than about 1 μm and a length of about 1 to about 20 meters, depending upon aperture.

Please replace the paragraph on page 11, lines 8-17, with the following amended paragraph:

A15

The electroactive elements may be arranged in a variety of ways in and/or on the reflective structure. For example, the reflecting structure may include a plurality of regions of electroactive material. The regions could have a variety of shapes. For example, the regions could include a plurality of strips of electroactive material. Alternatively, or additionally, the regions could have other shapes, such as rectangles. The regions may be arranged in a variety of configurations. Typically, the number and arrangement of regions of electroactive material are sufficient to permit the desired shape control of the reflecting structure. The embodiment shown in Fig. 2b includes a plurality of rectangular electroactive elements 29, only three of which are shown. On the other hand, the embodiment shown in Fig. 3 includes a plurality of strips of electroactive material 39.

Please replace the paragraph on page 12, line 17, to page 13, line 1, with the following amended paragraph:

A16

To activate the electroactive elements, the reflecting structure includes a plurality of circuit elements for applying a voltage to the electroactive elements. The voltage application circuit elements can include wiring, connectors, actuation pads and/or other circuit elements. Fig. 1a illustrates one embodiment of circuit elements that may be included in the reflecting structure. These include wiring 13 printed on the front side 3 of the first layer 1. The wiring 13 leads to contact pads 15 also on the front side 3 of the first layer 1. The contact pads 15 will be in electrical contact with the electroactive elements not shown in Figs. 1a and 1b. The reflecting structure may include connectors 17 for connecting to a ribbon connector to a microprocessor.

Please replace the paragraph on page 13, lines 3-5, with the following amended paragraph:

A17

The wiring 13 and contact pads 15 may be formed of an electrically conductive material, such as copper. Typically, according to the present invention, the circuit elements are formed utilizing microlithography techniques usually employed in the microelectronics industry.

Please replace the paragraph on page 13, lines 7-12, with the following amended paragraph:

A18

Electroactive elements are shown in Fig. 2b on the back side 21 of the second layer 19. As Fig. 2b shows, the second layer 19 may also include circuit elements (wiring 25 and contact pads 27) to apply the voltage to the electroactive elements. Fig. 2b also illustrates a plurality of rectangular shaped electroactive elements 29. A reflecting structure according to the present invention would typically include many more than the three electroactive elements 29 shown in Fig. 2b. Along these lines, the structure would typically include elements to control the contour of the entire reflecting structure.

Please replace the paragraph on page 13, line 22, to page 14, line 1, with the following amended paragraph:

A19

The embodiment shown in Fig. 3 includes a NiTiNOL shape-retaining strip 41. A negative electrode 43 and a positive electrode 45 are provided with the first layer 1 to electrically heat the electroactive shape-retaining strip 41 to alter its shape[, as discussed above]. In some embodiments, a plurality of shape-retaining strips 41 are symmetrically arranged on and extend substantially entirely across the front side 3 of the first layer 1, such as the shape-retaining strips 9 shown in Fig. 1a.